Journal of Crystal Growth 122 (1992) 400–403
North-Holland

JOURNAL OF CRYSTAL GROWTH

Author Index

Addadi, L., see Markman 122 (1992) 344
Arad, T., see Weinstein 122 (1992) 286
Asano, K., S. Fujita, T. Senda and Y. Mitsui, Crystal growth of ribonuclease S under microgravity 122 (1992) 323
Ataka, M., see Elgersma 122 (1992) 31
Ataka, M., K. Shinzawa-Itoh and S. Yoshikawa, Phase diagrams of a crystalline membrane protein, bovine heart cytochrome *c* oxidase, in the salting-in region 122 (1992) 60
Aust, R.M., see McElroy 122 (1992) 265

Badasso, M., B.L. Sibanda, J.B. Cooper, C.G. Dealwis and S.P. Wood, Crystal quality and inhibitor binding by aspartic proteinases; preparation of high quality crystals of mouse renin 122 (1992) 393
Bennema, P., Theory of growth and morphology applied to organic crystals; possible applications to protein crystals 122 (1992) 110
Bentley, G.A., see Eiselé 122 (1992) 337
Berchtold, H., see Reshetnikova 122 (1992) 360
Berkovitch-Yellin, Z., see Weinstein 122 (1992) 286
Berkovitch-Yellin, Z., see Markman 122 (1992) 344
Bhat, T.N., see Eiselé 122 (1992) 337
Birnbaum, G.I., see Ward 122 (1992) 235
Bishop, J.B., W.J. Fredericks, S.B. Howard and T. Sawada, Dynamic light scattering analysis of solutions from which lysozyme crystals grow 122 (1992) 41
Blow, D.M., see Chayen 122 (1992) 176
Blow, D.M., see Lloyd 122 (1992) 355
Boeckh, T., see Weinstein 122 (1992) 286
Bosch, R., P. Lautenschlager, L. Potthast and J. Stapelman, Experiment equipment for protein crystallization in μg facilities 122 (1992) 310
Boulot, G., see Eiselé 122 (1992) 337
Brady, L., see Xiao 122 (1992) 144
Brange, J., see Xiao 122 (1992) 144
Brick, P., see Lloyd 122 (1992) 355

Cacioppo, E. and M.L. Pusey, The effects of acid treatment and calcium ions on the solubility of concanavalin A 122 (1992) 208
Candau, S., see Skouri 122 (1992) 14
Carlson, W.E., see Durbin 122 (1992) 71
Carter, D.C., see Miller 122 (1992) 306
Casay, G.A. and W.W. Wilson, Laser scattering in a hanging drop vapor diffusion apparatus for protein crystal growth in a microgravity environment 122 (1992) 95
Cavaliere, A., see Ward 122 (1992) 235
Chayen, N.E., P.D. Shaw Stewart and D.M. Blow, Microbatch crystallization under oil – a new technique allowing many small-volume crystallization trials 122 (1992) 176
Chernov, B., see Minasov 122 (1992) 136
Chitarra, V., see Eiselé 122 (1992) 337
Chung, Y.J., see Sousa 122 (1992) 366
Clarkson, J., see Xiao 122 (1992) 144
Cody, V., see Luft 122 (1992) 181
Cohen, I.R., see Markman 122 (1992) 344
Conroy, M.J. and R.E. Lovrien, Matrix coprecipitating and cocrystallizing ligands (MDD ligands) for bioseparations 122 (1992) 213
Cooper, J.B., see Badasso 122 (1992) 393
Crosio, M.-P. and M. Jullien, Fluorescence study of precrystallization of ribonuclease A: effect of salts 122 (1992) 66

D'Arcy, A., see Zulauf 122 (1992) 102
De Caluwé, G.L.J., see De Grip 122 (1992) 375
De Grip, W.J., J. van Oostrum and G.L.J. de Caluwé, Studies towards the crystallization of the rod visual pigment rhodopsin 122 (1992) 375
Dealwis, C.G., see Badasso 122 (1992) 393
DeMattei, R.C. and R.S. Feigelson, Controlling nucleation in protein solutions 122 (1992) 21
DeMattei, R.C., R.S. Feigelson and P.C. Weber, Factors affecting the morphology of isocitrate lyase crystals 122 (1992) 152
Derewenda, U., see Xiao 122 (1992) 144
DeTitta, G.T., see Luft 122 (1992) 181
Dodson, E.J., see Xiao 122 (1992) 144
Dodson, G.G., see Xiao 122 (1992) 144
Drenth, J. and C. Haas, Protein crystals and their stability 122 (1992) 107
Dreyer, M., see Schulz 122 (1992) 385
Ducruix, A.F., see Guilloteau 122 (1992) 223
Durbin, S.D. and W.E. Carlson, Lysozyme crystal growth studied by atomic force microscopy 122 (1992) 71

Edgington, T.S., see Ruf 122 (1992) 253
Eiselé, J.-L., G. Boulot, V. Chitarra, M.M. Riottot, H. Souchon, A. Houdusse, G.A. Bentley, T.N. Bhat, S. Spinelli and R.J. Poljak, Cloning, bacterial expression and crystallization of Fv antibody fragments 122 (1992) 337
Elgersma, A.V., M. Ataka and T. Katsura, Kinetic studies on the growth of three crystal forms of lysozyme based on the measurement of protein and Cl^- concentration changes 122 (1992) 31
Elias, D., see Markman 122 (1992) 344

Feigelson, R.S., see DeMattei 122 (1992) 21
Feigelson, R.S., see DeMattei 122 (1992) 152
Franceschi, F., see Weinstein 122 (1992) 286
Fredericks, W.J., see Bishop 122 (1992) 41
Fukuba, Y., see Sato 122 (1992) 87
Fukumoto, Y., see Yoshikawa 122 (1992) 298
Fukuyama, K., see Yoshikawa 122 (1992) 298
Fujita, S., see Asano 122 (1992) 323

Giegé, R., see Skouri 122 (1992) 14
Giegé, R., see Lorber 122 (1992) 168
Glotz, C., see Weinstein 122 (1992) 286
Guilloteau, J.-P., M.M. Riès-Kaut and A.F. Ducruix, Variation of lysozyme solubility as a function of temperature in the presence of organic and inorganic salts 122 (1992) 223
Güntherodt, H.-J., see Littke 122 (1992) 80

Haas, C., see Drenth 122 (1992) 107
Haber, M., see Littke 122 (1992) 80
Haider, M., see Weinstein 122 (1992) 286
Hannick, L.I., M.A. Perozzo, L.W. Schultz and K.B. Ward, A PC-based spreadsheet for tracking results of crystallization experiments 122 (1992) 303
He, X.M., see Miller 122 (1992) 306
Heinrichs, M., see Heinrichs 122 (1992) 186
Heinrichs, W., M. Heinrichs and H. Schönert, Growth of protein single crystals in a periodically changing solubility gradient: description of the method and first results 122 (1992) 186
Hilgenfeld, R., A. Liesum, R. Storm and A. Plaas-Link, Crystallization of two bacterial enzymes on an unmanned space mission 122 (1992) 330
Hilgenfeld, R., see Reshetnikova 122 (1992) 360
Hirai, K., see Sato 122 (1992) 87
Houdusse, A., see Eiselé 122 (1992) 337
Howard, S.B., see Bishop 122 (1992) 41

Jahn, W., see Weinstein 122 (1992) 286
Jakob, C.G., see Kuciel 122 (1992) 199
Janes, R.W., see Wood 122 (1992) 204
Jullien, M., see Crosio 122 (1992) 66

Katsura, T., see Elgersma 122 (1992) 31
Kawamoto, M., see Yoshikawa 122 (1992) 298
Klein, C., see Schulz 122 (1992) 385
Koerver, W., see Schmidt 122 (1992) 317
Kreusch, A., see Schulz 122 (1992) 385
Kubota, T., see Yoshikawa 122 (1992) 298
Kuciel, R., C.G. Jakob, L. Lebioda and W.S. Ostrowski, Crystallization of human prostatic acid phosphatase using biphasic systems 122 (1992) 199
Kung, W., see Ward 122 (1992) 235

Lafer, E.M., see Sousa 122 (1992) 366
Langowski, J., see Thibault 122 (1992) 50
Lapointe, J., see Lin 122 (1992) 242
LaPolla, R.J., see Ruf 122 (1992) 253
Laschever, M., see Weinstein 122 (1992) 286
Lautenschlager, P., see Bosch 122 (1992) 310
Leberman, R., see Thibault 122 (1992) 50
Lebioda, L., see Kuciel 122 (1992) 199
Leong, L.E.-C., P.A. Walker and A.G. Porter, Efficient expression and purification of a protease from the common cold virus, human rhinovirus type 14 122 (1992) 246
Liesum, A., see Hilgenfeld 122 (1992) 330
Lin, S.X., B. Sailofsky, J. Lapointe and M. Zhou, Preparative fast purification procedure of various proteins for crystallization 122 (1992) 242
Littke, W., M. Haber and H.-J. Güntherodt, Investigation of crystal surfaces on organic layer lattice structures and protein structures using scanning tunneling microscopy and atomic force microscopy 122 (1992) 80
Lloyd, L.F., P. Brick, D.M. Blow and Lou Mei-Zhen, Crystallization studies on HIV-1 reverse transcriptase 122 (1992) 355
Lorber, B., see Skouri 122 (1992) 14
Lorber, B. and R. Giegé, A versatile reactor for temperature controlled crystallization of biological macromolecules 122 (1992) 168
Lou Mei-Zhen, see Lloyd 122 (1992) 355
Lovrien, R.E., see Conroy 122 (1992) 213
Luft, J.R., V. Cody and G.T. DeTitta, Experiences with HANGMAN: a macromolecular hanging drop vapor diffusion technique 122 (1992) 181

Malinina, L., see Minasov 122 (1992) 136
Markman, O., D. Elias, L. Addadi, I.R. Cohen and Z. Berkovitch-Yellin, Monoclonal antibodies to insulin and to the insulin receptor (anti-ID) modify the morphologies of insulin crystals 122 (1992) 344
Matsubara, H., see Yoshikawa 122 (1992) 298

McElroy, H.E., G.W. Sisson, W.E. Schoettlin, R.M. Aust and J.E. Villafranca, Studies on engineering crystallizability by mutation of surface residues of human thymidylate synthase 122 (1992) 265
McPherson, A., Two approaches to the rapid screening of crystallization conditions 122 (1992) 161
Miller, T.Y., X.M. He and D.C. Carter, A comparison between protein crystals grown with vapor diffusion methods in microgravity and protein crystals using a gel liquid–liquid diffusion ground-based method 122 (1992) 306
Minasov, G., V. Tereshko, B. Chernov and L. Malinina, An efficient and possibly general packing mode for crystals of B-DNA oligonucleotides 122 (1992) 136
Mitsuda, T., see Sato 122 (1992) 87
Mitsui, Y., see Asano 122 (1992) 323
Mittl, P., see Schulz 122 (1992) 385
Moriya, K., see Sato 122 (1992) 87
Müller, C.W., see Schulz 122 (1992) 385
Muller, Y.A., see Schulz 122 (1992) 385
Müller-Dieckmann, J., see Schulz 122 (1992) 385
Munch, J.-P., see Skouri 122 (1992) 14

Nemerow, G.R., see Stura 122 (1992) 273
Noble, M.E.M., see Wierenga 122 (1992) 231
Noever, D.A., Size effects in models for mechanically-stressed protein crystals and aggregates 122 (1992) 120

Ostrowski, W.S., see Kuciel 122 (1992) 199

Palmer, R.A., see Wood 122 (1992) 204
Pätz, B., see Schmidt 122 (1992) 317
Perozzo, M.A., see Ward 122 (1992) 235
Perozzo, M.A., see Hannick 122 (1992) 303
Plaas-Link, A., see Hilgenfeld 122 (1992) 330
Poljak, R.J., see Eiselé 122 (1992) 337
Porter, A.G., see Leong 122 (1992) 246
Potthast, L., see Bosch 122 (1992) 310
Proba, K., see Schulz 122 (1992) 385
Pusey, M.L., Continuing adventures in lysozyme crystal growth 122 (1992) 1
Pusey, M.L., see Wilson 122 (1992) 8
Pusey, M.L., see Cacioppo 122 (1992) 208

Reiser, C.O.A., see Reshetnikova 122 (1992) 360
Reshetnikova, L.S., N.K. Schirmer, C.O.A. Reiser, H. Berchtold, R. Storm, R. Hilgenfeld and M. Sprinzl, Crystals of intact elongation factor Tu from *Thermus thermophilus* diffracting to 1.45 Å resolution 122 (1992) 360
Riès-Kaut, M.M., see Guilloteau 122 (1992) 223
Riottot, M.M., see Eiselé 122 (1992) 337
Ruf, W., E.A. Sture, R.J. LaPolla, R. Syed, T.S. Edgington and I.A. Wilson, Purification, sequence and crystallization of an anti-tissue factor Fab and its use for the crystallization of tissue factor 122 (1992) 253
Sailofsky, B., see Lin 122 (1992) 242
Sawada, T., see Bishop 122 (1992) 41
Sato, K., Y. Fukuba, T. Mitsuda, K. Hirai and K. Moriya, Observation of lattice defects in orthorhombic hen-egg white lysozyme crystals with laser scattering tomography 122 (1992) 87
Schirmer, N.K., see Reshetnikova 122 (1992) 360
Schlauderer, G., see Schulz 122 (1992) 385
Schmidt, H.P., W. Koerver and B. Pätz, Practical aspects of crystal growth experiments on board EURECA-1 122 (1992) 317
Schoettlin, W.E., see McElroy 122 (1992) 265
Scholaert, H., see Ward 122 (1992) 235
Schönert, H., see Heinrichs 122 (1992) 186
Schulz, G.E., M. Dreyer, C. Klein, A. Kreusch, P. Mittl, C.W. Müller, J. Müller-Dieckmann, Y.A. Muller, K. Proba, G. Schlauderer, P. Spürgin, T. Stehle and M.S. Weiss, Highly ordered crystals of channel-forming membrane proteins, of nucleoside-monophosphate kinases, of FAD-containing oxidoreductases and of suger-processing enzymes and their mutants 122 (1992) 385
Schultz, L.W., see Hannick 122 (1992) 303
Senda, T., see Asano 122 (1992) 323
Shaw Stewart, P.D., see Chayen 122 (1992) 176
Shinzawa-Itoh, see Ataka 122 (1992) 60
Shinzawa-Itoh, K., see Yoshikawa 122 (1992) 298
Sibanda, B.L., see Badasso 122 (1992) 393
Sisson, G.W., see McElroy 122 (1992) 265
Skouri, M., J.-P. Munch, B. Lorber, R. Giegé and S. Candau, Interactions between lysozyme molecules under precrystallization conditions studied by light scattering 122 (1992) 14
Souchon, H., see Eiselé 122 (1992) 337
Sousa, R., Y.J. Chung, B.-C. Wang and E.M. Lafer, Single crystals of chimeric T7/T3 RNA polymerase with T3 promoter specificity 122 (1992) 366
Spinelli, S., see Eiselé 122 (1992) 337
Sprinzl, M., see Reshetnikova 122 (1992) 360
Spürgin, P., see Schulz 122 (1992) 385
Stapelmann, J., see Bosch 122 (1992) 310
Stehle, T., see Schulz 122 (1992) 385
Storm, R., see Hilgenfeld 122 (1992) 330
Storm, R., see Reshetnikova 122 (1992) 360
Stura, E.A., see Ruf 122 (1992) 253
Stura, E.A., G.R. Nemerow and I.A. Wilson, Strategies in the crystallization of glycoproteins and protein complexes 122 (1992) 273

Sweeney, E., see Wood 122 (1992) 204
Syed, R., see Ruf 122 (1992) 253

Tereshko, V., see Minasov 122 (1992) 136
Thibault, F., J. Langowski and R. Leberman, Optimizing protein crystallization by aggregate size distribution analysis using dynamic light scattering 122 (1992) 50
Tichelaar, W., see Weinstein 122 (1992) 286
Tse-Dinh, Y.-C., see Weber 122 (1992) 293
Tsukihara, T., see Yoshikawa 122 (1992) 298
Turkenburg, J., see Xiao 122 (1992) 144

Ueda, H., see Yoshikawa 122 (1992) 298
Uffen, D.R., see Ward 122 (1992) 235

Van Oostrum, J., see De Grip 122 (1992) 275
Villafranca, J.E., see Elroy 122 (1992) 265

Wagner, G., see Wegerhoff 122 (1992) 351
Walker, M.A., see Ward 122 (1992) 235
Walker, P.A., see Leong 122 (1992) 246
Wang, B.-C., see Sousa 122 (1992) 366
Ward, K.B., W.M. Zuk, M.A. Perozzo, M.A. Walker, G.I. Birnbaum, W. Kung, A. Cavaliere, D.R. Uffen and H. Scholaert, Dynamic telerobotic control of crystallization experiments 122 (1992) 235
Ward, K.B., see Hannick 122 (1992) 303
Weber, P.C., see DeMattei 122 (1992) 152
Weber, P.C., C.-X. Zhu and Y.-C. Tse-Dinh, Systematic investigation of crystallization parameters for protein–nucleic acid complexes: application to an active truncated form of *Escherichia coli* topoisomerase I 122 (1992) 293
Wegerhoff, J. and G. Wagner, Crystal growth of plant calmodulin 122 (1992) 351
Weinstein, S., W. Jahn, M. Laschever, T. Arad, W. Tichelaar, M. Haider, C. Glotz, T. Boeckh, Z. Berkovitch-Yellin, F. Franceschi and A. Yonath, Derivatization of ribosomes and of tRNA with an undecagold cluster: crystallographic and functional studies 122 (1992) 286
Weiss, M.S., see Schulz 122 (1992) 385
Wierenga, R.K., see Zeelen 122 (1992) 194
Wierenga, R.K., J.Ph. Zeelen and M.E.M. Noble, Crystal transfer experiments carried out with crystals of trypanosomal triosephosphate isomerase (TIM) 122 (1992) 231
Wilson, I.A., see Ruf 122 (1992) 253
Wilson, I.A., see Stura 122 (1992) 273
Wilson, L.J. and M.L. Pusey, Determination of monomer concentrations in crystallizing lysozyme solutions 122 (1992) 8
Wilson, W.W., see Casay 122 (1992) 95
Wood, S.P., see Badasso 122 (1992) 393
Wood, S.P., R.W. Janes, E. Sweeney and R.A. Palmer, Crystallization of bovine pancreatic polypeptide in the presence of crystalline diglycidyl ether of bisphenol A (Araldite): epitaxy or covalent nucleation? 122 (1992) 204

Xiao, B., G.G. Dodson, E.J. Dodson, J. Clarkson, J. Turkenburg, U. Derewenda, L. Brady and J. Brange, Mutant insulin crystal packing 122 (1992) 144

Yonath, A., see Weinstein 122 (1992) 286
Yoshikawa, S., see Ataka 122 (1992) 60
Yoshikawa, S., K. Shinzawa-Itoh, H. Ueda, T. Tsukihara, Y. Fukumoto, T. Kubota, M. Kawamoto, K. Fukuyama and H. Matsubara, Strategies for crystallization of large membrane protein complexes 122 (1992) 298

Zeelen, J.Ph. and R.K. Wierenga, The growth of yeast thiolase crystals using a polyacrylamide gel as dialysis membrane 122 (1992) 194
Zeelen, J.Ph., see Wierenga 122 (1992) 231
Zhou, M., see Lin 122 (1992) 242
Zhu, C.-X., see Weber 122 (1992) 293
Zuk, W.M., see Ward 122 (1992) 235
Zulauf, M. and A. D'Arcy, Light scattering of proteins as a criterion for crystallization 122 (1992) 102

Journal of Crystal Growth 122 (1992) 404–405
North-Holland

JOURNAL OF CRYSTAL GROWTH

Subject index

Amino
– acids 213
Antigen-antibody 337
Apparatus
– for solution growth
– – by low temperature method
– – – for microbatch crystallization under oil
– – – – of proteins 176
– – – using dialysis reactor
– – – – of proteins 310, 317
– – – using periodically changing solubility gradient
– – – – of proteins 186
– – – using telerobotic control
– – – – of lysozyme 235
– – – using temperature controlled reactor
– – – – of lysozyme 168
– for miscellaneous purposes
– – dynamic control in microgravity 95
– – laser scattering tomography 87

Calmodulin 351
Characterization methods
– by atomic force microscopy 71, 80
– by emission 66
– by light scattering 14, 41, 50, 102
– by liquid chromatography 212
– by optical microscopy 87, 110, 136
– by particle size distribution analysis 8
– by scanning tunneling microscopy 80
– by X-ray methods 80, 136, 144, 161, 199, 204, 223, 253, 265, 293, 298, 306, 323, 330, 337, 355, 360, 366, 375, 393
Computer simulation 110, 303
Concanavalin A 208
Convection 1, 120, 152, 306
Cytochrome *c* oxidase 60, 298

Dendritic growth 152
Devices 273
Diffusional control 317, 385
Dislocations 110
DNA 136

Hartman–Perdok theory 107

Impurity 110, 344
Insulin 144, 344
Interface 110, 344

Kinetics
– of growth 1, 31, 60, 71, 107, 110, 152, 235
– of nucleation 1, 31, 60, 120, 235

Lysozyme 1, 8, 14, 31, 41, 71, 80, 87, 168, 223, 330

Microgravity 8, 95, 120, 152, 161, 235, 306, 310, 317, 323, 330, 375, 385
Monte Carlo method 110
Morphological stability 152, 375
Morphology of growth 31, 110, 253, 323, 344, 351, 360

Nucleation 1, 14, 21, 31, 41, 50, 60, 66, 95, 204, 235, 253, 317

Organic crystals 1, 8, 14, 21, 31, 41, 50, 60, 66, 71, 80, 87, 95, 102, 107, 110, 120, 136, 144, 152, 161, 168, 176, 181, 186, 194, 199, 204, 208, 213, 223, 231, 235, 242, 246, 253, 265, 273, 286, 293, 298, 302, 306, 310, 317, 323, 330, 337, 344, 351, 355, 360, 366, 375, 385, 393

Perfection of crystals 87, 186, 306, 330
Periodic bond chain theory 351
Phase diagrams
– of concanavalin A 208
– of cytochrome *c* oxidase 60
– of DNA 136
– of lysozyme 1, 31, 223, 235
Phenomenological theory 204
Polymorphism/polytypism 223
Polypeptide 204
Prostatic acid phosphatase 199
Proteins 21, 50, 66, 95, 102, 107, 110, 120, 152, 161, 176, 181, 186, 194, 213, 231, 242, 253, 265, 273, 293, 298, 303, 306, 310, 317, 323, 337, 351, 355, 360, 375, 385, 393
Purification of materials 213, 242, 246, 253, 273, 293, 298, 337, 366, 375, 385, 393

Ribosomes 286
RNA 366

Solution growth technique
– by gel method
– – of proteins 194, 306
– by low temperature method
– – of cytochrome *c* oxidase 60
– – of insulin 144
– – of lysozyme 1, 8, 14, 31, 41, 87, 223, 235, 330
– – of polypeptides 204

– – of proteins 21, 253, 265, 317, 330, 351, 355
– – through hanging drop vapor diffusion
– – – of proteins 95, 152, 181, 231, 273, 286, 293, 306, 310, 360, 366, 375, 385
– – – of prostatic acid phosphatase 199
– – theory of 8
Statistical mechanics, molecular theory 31, 110
Strain 120
Supercooling, supersaturation 21, 31, 60, 110
Surface structure 71, 80, 110, 344

Thermodynamics 107, 110
Thermolysin 330

Virus
– HIV-1 355
– HRV-14 246